

--ABSTRACT

In a semiconductor device including both a large-diameter contact hole and a small-diameter contact hole which are formed to penetrate through an insulator film formed on a semiconductor substrate. The small-diameter contact hole is completely filled with a refractory conductive material, and the large-diameter contact hole is partially filled by the refractory conductive which covers a sidewall surface of the large-diameter contact hole to below the upper end of the large-diameter contact hole by a predetermined distance. A wiring conductor is deposited on the insulator film to cover the top surface of the plug and to fill at least in part the space remaining in the large-diameter contact hole. Thus, a small and stable contact resistance can be achieved both in the large-diameter contact hole and in the small-diameter contact hole.--